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10/597,576	10/09/2007	John G. Hildebrand	CCPC 0122 PUSA4	3052
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/597,576

Applicant(s)

HILDEBRAND ET AL.

Examiner

Nnenna N. Ekpo

Art Unit

2425

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE-08)
- Paper No(s)/Mail Date 04/19/2007.
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The reference listed in the Information Disclosure Statement filed on April 19, 2007 has been considered by the examiner (see attached PTO-1449 form).

Specification

2. The abstract of the disclosure is objected to because abstract is not on a separate page. Correction is required. See MPEP § 608.01(b).

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Claim Objections

3. **Claims 1 and 5** are objected to because of the following informalities:
a) **On line 11 of claim 1 and on line 10 of claim 5**, add --said-- or --the-- before “AV packets” since this is the second time “AV packets” is being mentioned.
Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 13-20 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims represent an abstract idea of rules that govern how video, audio and data should be transmitted to a client. The claims are

neither a machine, process, manufacture nor composition of matter and therefore can not be patentable.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 13, 16 and 18** are rejected under 35 U.S.C. 102(e) as being anticipated by El-Rafie (U.S. Patent No. 6,968,394).

Regarding **claim 13**, El-Rafie discloses a reference model for use in a cable system to support transportation of video, audio, and data signals over a common transport, the reference model comprising:

an application layer defining creation of the video, audio, and data signals (see fig 7B (211), col. 15, lines 19-32);

a link layer defining multiplexation of the video, audio, and data signals into the common transport (see fig 7B (214), col. 24, lines 65-col. 25, lines 14); and

a physical layer defining transportation of the common transport over the cable system (see fig 7B (215), col. 8, lines 3-7, lines 26-39).

Regarding **claim 16**, El-Rafie discloses everything claimed as applied above (see *claim 13*). El-Rafie discloses a transport layer defining management of the video, audio, and data signals (see fig 7B (212), col. 28, lines 7-24).

Regarding **claim 18**, El-Rafie discloses everything claimed as applied above (see *claim 13*). El-Rafie discloses a network layer defining transmission of the video, audio, and data signals between networks (see fig 7B (213), col. 24, lines 38-54).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 14 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over El-Rafie (U.S. Patent No. 6,968,394) as applied to claim 13 above, and further in view of Craven et al. (U.S. Publication No. 2005/0123001).

9. Regarding **claim 14**, El-Rafie discloses everything claimed as applied above (see *claim 13*). El-Rafie discloses wherein the link layer defines multiplexing of the signals (see fig 7B (214), col. 24, lines 65-col. 25, lines 14).

However, El-Rafie fails to specifically disclose data over cable services interface specifications (DOCSIS).

Craven et al. discloses data over cable services interface specifications (DOCSIS) (see paragraph 0014, lines 8-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify El-Rafie's invention with the above mentioned limitation as taught by Craven et al. for the advantage of providing seamless interoperability to cable technology.

Regarding **claim 15**, El-Rafie discloses everything claimed as applied above (see *claim 13*). El-Rafie discloses wherein the link layer (see fig 7B (214).

However, El-Rafie fails to specifically disclose DOCSIS transmission convergence sub-layer that include identifies data packets with packet identifier (PID) 0x1FFE and without an associated adaptation field and the audio and video packets with PIDs other than those having the 0x1FFE designation and with an adaptation field for decoder synchronization.

Craver et al. discloses DOCSIS transmission convergence sub-layer that include identifies data packets with packet identifier (PID) 0x1FFE and without an associated adaptation field and the audio and video packets with PIDs other than those having the 0x1FFE designation and with an adaptation field for decoder synchronization (see paragraphs 0027, 0047, 0049).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify El-Rafie's invention with the above

mentioned limitation as taught by Craven et al. for the advantage of providing seamless interoperability to cable technology.

10. **Claims 17 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over El-Rafie (U.S. Patent No. 6,968,394) and Craven et al. (U.S. Publication No. 2005/0123001) as applied to *claim 15* above, and further in view of Chelehmal et al. (U.S. Publication No. 2002/0046406).

11. Regarding **claim 17**, El-Rafie and Craven et al. discloses everything claimed as applied above (see *claim 15*). El-Rafie discloses a transport layer (see fig 7B (212)).

However, El-Rafie and Craven et al. fails to specifically disclose management based on real-time protocols (RTP), user datagram protocols (UDP), transmission control protocols (TCP), and/or MPEG-2 protocols.

Chelehmal et al. discloses management based on real-time protocols (RTP), user datagram protocols (UDP), transmission control protocols (TCP), and/or MPEG-2 protocols (see paragraphs 0025 and 0028).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify El-Rafie and Craven et al.'s invention with the above mentioned limitation as taught by Chelehmal et al. for the advantage of using other real-time protocols.

Regarding **claim 19**, El-Rafie, Craven et al. and Chelehmal et al. discloses everything claimed as applied above (see *claim 17*). El-Rafie discloses wherein the

network layer defines transmission based on internet protocols (IP) (see col. 15, lines 19-36).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over El-Rafie (U.S. Patent No. 6,968,394) as applied to claim 13 above, and further in view of Perlman (U.S. Patent No. 6,813,643), and Chelehmal et al. (U.S. Publication No. 2002/0046406).

Regarding **claim 20**, El-Rafie discloses everything claimed as applied above (see *claim 13*). El-Rafie discloses layers (see fig 7B).

However, El-Rafie is silent on a baseline architecture, an extended mode 1 architecture, and an extended mode 2 architecture.

Perlman discloses a baseline architecture (see col. 4, lines 61-col. 5, line 6), an extended mode 1 architecture (see col. 3, lines 41-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify El-Rafie 's invention with the above mentioned limitation as taught by Perlman for the advantage of transmitting data in a single transport stream.

However, El-Rafie and Perlman fails to specifically disclose an extended mode 2 architecture.

Chelehmal et al. discloses an extended mode 2 architecture (see cited portion, but not limited to paragraphs 0025-0028).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify El-Rafie and Perlman's invention with the above mentioned limitation as taught by Chelehmal et al. for the advantage of using other real-time protocols.

12. **Claims 1-3, 5-7, 11-12 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman (U.S. Patent No. 6,813,643) in view of Rakib (U.S. Publication No. 2002/0031120).

Regarding **claims 1 and 5**, Perlman discloses a flexible subscriber video device (SVD) configured to support playback of AV signals packetized for delivery in an AV only transport associated with AV packets and an integrated transport associated with AV and data packets, the SVD comprising (see figs 2a-2c):

a switch configured to simultaneously separate packets associated with the AV only transport from packets associated with the integrated transport (see col. 2, lines 50-col. 3, line 6);

a data processor in communication with the switch and configured to separate AV related packets from data related packets included within the integrated transport (see col. 4, lines 51-59).

However, Perlman is silent as to a demultiplexer in communication with the switch and data processor configured to demultiplex AV packets outputted therefrom.

Rakib discloses a demultiplexer in communication with the switch and data processor configured to demultiplex AV packets outputted therefrom (see paragraph 0078).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Perlman's invention with the above mentioned limitation as taught by Rakib for the advantage of payloads supplied to a decoder are always correct and is therefore useful for DVR players, optical disk players etc.

Regarding **claim 2**, Perlman and Rakib discloses everything claimed as applied above (see *claim 1*). Perlman discloses wherein the AV only transport is associated with a baseline architecture (see col. 4, lines 61-col. 5, line 6).

Rakib discloses wherein the AV only transport is associated with a baseline architecture (see paragraphs 0033 and 0039).

Regarding **claim 3**, Perlman and Rakib discloses everything claimed as applied above (see *claim 1*). Perlman discloses wherein the integrated transport is associated with an extended mode 1 architecture (see col. 3, lines 41-62).

Regarding **claim 6**, Perlman and Rakib discloses everything claimed as applied above (see *claim 1*). Rakib discloses the SVD further comprising a decoder in

communication with the demultiplexer and configured to decode AV payloads for output to a video port and an audio port (see paragraph 0054).

Regarding **claim 7**, Perlman and Rakib discloses everything claimed as applied above (see *claim 6*). Rakib discloses the SVD wherein the decoder is configured for decoding payloads compressed according to MPEG-2 protocols (see paragraph 0057, lines 51-59).

Regarding **claim 11**, Perlman and Rakib discloses everything claimed as applied above (see *claim 5*). Perlman discloses the SVD further comprising a cable modem in communication with the DOCSIS processor for processing data packets (see col. 4, lines 11-23).

Regarding **claim 12**, Perlman and Rakib discloses everything claimed as applied above (see *claim 5*). Perlman discloses the SVD further comprising a tuner and demodulated configured to associate with the transport and demodulate the tuned transport for output to the switch (see figs 2a-2c).

Rakib discloses a radio frequency (RF) carrier frequency (see paragraphs 0015, 0039).

Regarding **claim 21**, Perlman discloses a flexible subscriber video device (SVD) configured to support playback of AV signals carried in a first or second transport, the

first transport having packets with only AV payloads and the second transport having packets with AV payloads and other packets with data payloads, the SVD comprising (see figs 2a-2c):

a switch configured to simultaneously separate packets associated with the AV only transport from packets associated with the integrated transport (see col. 2, lines 50-col. 3, line 6);

a data processor in communication with the switch and configured to separate AV related packets from data related packets included within the integrated transport (see col. 4, lines 51-59).

However, Perlman is silent on simultaneously routing the first transport to a demultiplexer and the second transport to a data processor;

wherein the demultiplexer is configured to demultiplex the AV payloads for decoding and output as audio and video signals; and

wherein the data processor is configured to separate the AV payloads from the data payloads carried in the second transport and to output the AV payloads to the demultiplexer and the data payloads to a microprocessor such that the SVD is configured to simultaneously receive both of the first and second transport streams and to decode and process the associated AV and data payloads.

Rakib discloses simultaneously routing the first transport to a demultiplexer and the second transport to a data processor (see paragraph 0078);

wherein the demultiplexer is configured to demultiplex the AV payloads for decoding and output as audio and video signals (see paragraph 0054); and

wherein the data processor is configured to separate the AV payloads from the data payloads carried in the second transport and to output the AV payloads to the demultiplexer and the data payloads to a microprocessor such that the SVD is configured to simultaneously receive both of the first and second transport streams and to decode and process the associated AV and data payloads (see paragraph 0078).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Perlman's invention with the above mentioned limitation as taught by Rakib for the advantage of payloads supplied to a decoder are always correct and is therefore useful for DVR players, optical disk players etc.

13. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman (U.S. Patent No. 6,813,643) and Rakib (U.S. Publication No. 2002/0031120) as applied to *claim 1* above, and further in view of Chelehma et al. (U.S. Publication No. 2002/0046406).

14. Regarding **claim 4**, Perlman and Rakib discloses everything claimed as applied above (see *claim 1*). However, Perlman and Rakib are silent on the integrated transport is associated with an extended mode 2 architecture.

Chelehma et al. discloses the integrated transport is associated with an extended mode 2 architecture (see cited portion, but not limited to paragraphs 0025-0028).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Perlman and Rakib's invention with the above mentioned limitation as taught by Chelehmah et al. for the advantage of using other real-time protocols.

15. **Claims 8-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman (U.S. Patent No. 6,813,643) and Rakib (U.S. Publication No. 2002/0031120) as applied to *claim 1* above, and further in view of Lu et al. (U.S. Publication No. 2004/0179610).

16. Regarding **claim 8**, Perlman and Rakib discloses everything claimed as applied above (see claim 6). However, Perlman and Rakib fails to specifically disclose the decoder is configured for decoding payloads compressed according to advanced video compression (AVC) protocols.

Lu et al. discloses the decoder is configured for decoding payloads compressed according to advanced video compression (AVC) protocols.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Perlman and Rakib's invention with the above mentioned limitation as taught by Lu et al. for the advantage of programs coming into the set top box already compressed into MPEG-2 format.

Regarding **claim 9**, Perlman, Rakib and Lu et al. discloses everything claimed as applied above (*see claim 8*). Lu et al. discloses the AVC protocols are associated with MPEG-4 (see paragraph 0054).

Regarding **claim 10**, Perlman, Rakib and Lu et al. discloses everything claimed as applied above (*see claim 8*). Lu et al. discloses the AVC protocols are associated with H.264 (see paragraph 0054).

Citation of Pertinent Prior Art

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Briggs (U.S. Patent No. 7,219,367) discloses receiving a second type of communication channel when the first type of data is not available.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nnenna N. Ekpo whose telephone number is 571-270-1663. The examiner can normally be reached on Monday - Friday 7:30 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Pendleton can be reached on 571-272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NNE/
Patent Examiner
December 3, 2008.

/Brian T. Pendleton/
Supervisory Patent Examiner, Art Unit 2425